

Renewable Energy Question 37: *How are renewable energy sources and distributed generation impacting grid operation and reliability?*

Executive Summary

1. The variability and unpredictability of the intermittent supply from renewable resources such as wind and solar have created some operational challenges and raised reliability concerns for electric system operators. Various integration studies have been conducted to address the cost of reliability associated with overcoming these operational challenges
2. Most integration studies suggest that the cost of integration for intermittent renewable resources such as wind is in the range of \$2-9 / MWh. This cost increases as more renewable generation is connected to the electric grid
3. Although the Midwest Independent System Operator has taken some measures to mitigate the challenges of integrating wind generation, the extent to which these measures will support renewable integration is still unclear

Please refer to Renewable Energy Question 6 for a more detailed discussion